

WHAT I CLAIM IS:

A support structure for isolating earthquake motions, comprising:

a pressure receiving concave-curved steel plate connected with a structure foundation; and a pressure applying convex-curved steel plate connected with a foundation column opposing to said concave-curved steel plate, thus forming a gauge portion between them;

a means of interposing two types of pluralities of steel balls in said gauge between the concave-curved steel plate and convex-curved steel plate;

a means of arranging one type of said balls to be made with (less accuracy) smaller diameter than that of other group of balls:

a means of surrounding two types of pluralities of steel balls with aligning frame so that they are mounted to come in point contact in all directions;

a means of isolating a linkage of earthquake

motions by conflictless rolling slide of said types of steel balls, a group of pressure receiving larger balls and a group of pressure applying smaller balls;

a means of covering all the surface of top and bottom steel plates except said curved surfaces with concrete, thus forming a column as a foundation of a construction;

a means of jointing said column including said pressure applying convex curved surface with a foundation of a structure by bolts and nuts;

a means of isolating the linkage of earthquake motions to the structure by unified simultaneous rolling of said two types of balls;

2. A support structure for isolating earthquake motions as claimed in claim 1;

a means of moving the structural column vertically by foundation pressure receiving curved surface, thereby, stops a propagating movement of earthquake by shock absorber effect of

spherical level difference (energy generated), by which isolating the earthquake motion and stopping the free movement.

3. A support structure for isolating earthquake motions as claimed in claim 1; a means of giving the foundation hoop a function of suppress the foundation column not to remove from the pressure receiving balls when jump-up phenomenon caused by directly under earthquake or float-up phenomenon caused by typhoon, in this case the hoop is put on the foundation.